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Application Serial No. 10/669,222
Reply to Office Action dated October 4, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A ready-to-eat, high protein and high fiber food product fabricated from a food dough, comprising:
 - A. sufficient amounts of at least one protein ingredient to provide a total protein content of about 50% to 75% (dry weight) of the food product;
 - B. sufficient amounts of at least one dietary fiber ingredient to provide a, high total fiber content ~~of about 1~~ up to 35% (dry weight);
 - C. sufficient amounts of a starch containing ingredient to provide a starch content of about 5-45% ; and,
wherein the food dough has a fat content of 2% or less,
wherein the food product has a density ranging from about 0.1 to 0.3 ~~0.25~~ g/cc.; and,
wherein the food product has a moisture content of less than 5%;
wherein the food product is high in both protein and fiber, low in fat, soft and non-gritty, while exhibiting a minimum glassy texture.
2. (original) The food product of claim 1 comprising at least two protein ingredients.
3. (original) The food product of claim 2 wherein at least a portion of the protein is provided by an ingredient selected from the group consisting of soy protein isolate, whey protein isolate, casein, legume protein isolates, soy protein concentrate, egg albumin, wheat protein concentrate, legume protein concentrates, and mixtures thereof.

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4. (original) The food product of claim 2 comprising whey protein isolate and soy protein isolate.
5. (currently amended) The food product of claim 4 wherein the weight ratio of whey protein isolate to soy protein isolate ranges from about 1:2 to about 5:1, and, wherein the food product has a crush strength ~~aging from 5~~ ranging from 0.25 to 3.5 kg per cubic centimeter.
6. (original) The food product of claim 5 wherein the fiber ingredient includes a member selected from the group consisting of powdered cellulose, carboxyl methyl cellulose, oat bran, corn bran, wheat bran, rice bran, inulin, barley bran, and mixtures thereof.
7. (original) The food product of claim 3 wherein the food product is free of soy protein.
8. (original) The food product of claim 6 additionally comprising a high potency sweetener.
9. (original) The food product of claim 6 wherein the fiber ingredient includes a member selected from the group consisting of powdered cellulose, carboxyl methyl cellulose, oat bran, corn bran, wheat bran, inulin, and mixtures thereof.
10. (original) The food product of claim 2 in the form of a dried food piece having a moisture content of about 2% -6%.
11. (original) The food product of claim 10 wherein the dried food piece includes a topical coating.

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12. (original) The food product of claim 2 wherein the starch containing ingredient is selected from the group consisting of rice starch, corn starch, wheat starch, potato starch, rice flour, corn flour, wheat flour, oat flour and mixtures thereof.
13. (original) The food product of claim 11 wherein the topical coating includes a sweetener.
14. (original) The food product of claim 6 wherein the starch containing ingredient includes rice starch or rice flour.
15. (original) The food product of claim 2 in the form of pieces having a piece count ranging from about 2- 400 /10g.
16. (original) The food product of claim 15 wherein the topical coating includes particulates.
17. (currently amended) The food product of claim 1 wherein the ~~starchy cereal~~ starch containing ingredient includes rice flour, wheat flour and mixtures thereof.
18. (currently amended) The food product of claim 12 additionally comprising about 0.1% to 1% of carboxymethyl cellulose.
19. (currently amended) The food product of ~~claim 17~~ claim 1 comprising ~~about 50-65% total protein and about 1-16%~~ 16.5-35% total fiber.
20. (original) The food product of claim 15 having a starch content ranging from about 5-25%.

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21. (currently amended) The food product of claim ~~of claim 16 wherein the pieces have a density ranging from about 0.1 to 0.3 g/cc~~ 19 wherein the total fiber content comes from both soluble and insoluble fiber sources.
22. (original) The food product of claim 1 having a sugar content of less than 5%.
23. (currently amended) The food product of claim 2 ~~having a fat content of less than 4%~~ which is free of any absorbed fat.
24. (original) The food product of claim 2 additionally including about 0.5% to 4% salt.
25. (original) The food product of claim 2 wherein at least a portion of the fiber ingredient is supplied by oat bran, white wheat bran and mixtures thereof.
26. (original) The food product of claim 3 additionally comprising an ingredient selected from the group consisting of egg powder, lecithin and mixtures thereof.
27. (original) The food product of claim 15 in the form of spheres, ovoids, rings or "O's", ribbons or flakes, shreds and mixtures thereof,
28. (original) The food product of claim 27 additionally comprising dried fruit particles, nut pieces and mixtures thereof.
29. (original) The food product of claim 27 admixed with nutrient cluster particles.

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30. (currently amended) A method for preparing a high protein and high fiber containing food product, comprising the steps of:
- providing a hydrated, hot, worked, expandable food dough or plastic mass in an extruder having at least one screw and an exit die orifice comprising:
 - sufficient amounts of at least one protein ingredient to provide a total protein content about 50% to 75% (dry weight) of the food product;
 - sufficient amounts of at least one dietary fiber ingredient to provide a high total fiber content ~~of about 1~~ up to 35% (dry weight); and,
 - sufficient amounts of a starch containing ingredient to provide a starch content of about 5-25%;
- wherein the dough has a moisture content ranging from about 8% to 25%;
- extruding the dough or plastic mass under conditions to directly expand upon extrusion and forming the expanded mass into puffed pieces; and
- drying the puffed pieces to form high protein and high fiber containing puffed finished food products which are low in fat, soft and non-gritty, while exhibiting a minimum glassy texture.
31. (original) The method of claim 30 wherein step A includes a sub-step of:
- working the dough by rotating the screw to impart sufficient amounts of Specific Mechanical Energy ranging from about 100 to 450 W-hr./kg.
32. (original) The method of claim 31 wherein in step A prior to exiting through a die orifice the dough has
- a temperature ranging from about 110 to 180°C;
 - a moisture content of about 8% to 25%, and,
 - a pressure ranging from about 2500 to 25,000 kPA (about 360 to 3625 psi)
33. (original) The method of claim 32 wherein step A is practiced with:
- a residence time ranging from about 2 to 150 seconds.

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34. (original) The method of claim 33 wherein step A is practiced with a screw RPM ranging from about 600-800 RPM.
35. (original) The method of claim 34 wherein in step A the extruder has an L/D ratio from about 4 to about 40.
36. (original) The method of claim 33 wherein in step B the puffed pieces have a moisture content ranging from about 7 to 15%.
37. (original) The method of claim 36 wherein in step B the puffed pieces are shaped into spheres, ovoids, strands, ribbons or flakes, ring or "O's", and mixtures thereof.
38. (currently amended) The method of claim ~~37~~ wherein the R-T-E cereal composition ~~is of claim 8 of claim 30~~ wherein sufficient amounts of the at least one dietary fiber ingredient are added to provide about 16.5-35% total fiber.
39. (original) The method of claim 38 wherein at least a portion of the fiber is provided by powdered cellulose.
40. (original) The method of claim 39 wherein at least a portion of the fiber is provided by oat bran.
41. (original) The method of claim 41 wherein at least a portion of the fiber is provided by inulin.
42. (original) The method of claim 30 wherein the dough includes at least two protein ingredients.

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43. (original) The method of claim 42 wherein at least a portion of the protein is provided by soy protein concentrate, soy protein isolate, whey protein concentrate, whey protein isolate and mixtures thereof.
44. (original) The method of claim 43 having a excess of whey protein concentrate or whey protein isolate than soy protein concentrate or soy protein isolate.
45. (currently amended) The method of claim 30 wherein the starch containing ingredient is selected from the group consisting of rice starch, corn starch, wheat starch, potato starch, rice flour, corn flour, wheat flour, oat flour and mixtures thereof.
46. (original) The method of claim 30 wherein the extruder is a high speed twin screw extruder.
47. (original) The method of claim 30 wherein step C is practiced to toast the puffed pieces to provide toasted finished puffed food products.
48. (original) The method of claim 47 additionally comprising the step of applying a topical coating.
49. (original) The method of claim 48 wherein the topical coating includes flavored particulates.
50. (original) The method of claim 30 wherein step A is practiced using twin screw extruder.